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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

This Action is in response to Applicant's response filed on 12/12/2007. **Claims 1-22** are still pending in the present application. **This action is made FINAL.**

Response to Arguments

Applicant essentially argues that Li fails to disclose that the bits indicate reception states of two channels. Furthermore, Applicant argues that Lin fails to disclose the use of the EIB in indicating the reception states of two channels.

The Examiner respectfully disagrees. Li discloses that the particular bit being transmitted over each of the sub-channels depends on whether mobile-telephone is currently using both the forward fundamental and supplemental channels (read as two channels). Figure 4 depicts a structure for a power control group 40 that is transmitted over a power control sub-frame when mobile-telephone is using both the forward fundamental and supplemental channels. Power control group 40 comprises four bits. The first bit is a pilot bit which is transmitted over a pilot sub-channel. The second bit is a supplemental power control bit for indicating to base station 10 whether to increase or decrease the transmission power for mobile-telephone 12's forward supplemental channel. The supplemental power control bit is transmitted over a supplemental power control sub-channel. The third bit is another pilot bit which is transmitted over a second pilot sub-channel. The fourth bit is a fundamental power control bit for indicating to base station 10 whether to increase or decrease the transmission power for mobile-telephone 12's forward fundamental channel. The fundamental power control bit is transmitted over a fundamental power control sub-channel. Thus, the pilot sub-channels are the first and third sub-

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channels of the pilot control sub-frame, and the supplemental and fundamental sub-channels are the second and fourth sub-channels, respectively, of the power control sub-frames. (col. 3, lines 12-52).

Furthermore, Lin discloses each message transmitted by base station is included within a user frame. The user frame includes a signaling message. The CDMA air interface standards that support Rate Set 2 support the Erasure Indicator Bit (EIB) (read as reception state) reported by mobile unit on the reverse link. Currently, the EIB is used for forward channel power control to control the power at which an RF signal is transmitted from a base station. (abstract; col. 3, lines 6-27)

The recited claim language is given the broadest reasonable interpretation. As a result, the argued features are written such that they read upon the cited references; therefore, the previous rejection still applies.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Li et al. (US 6,590,873 B1; hereinafter Li)** in view of **Lin et al. (US 6,249,894; hereinafter Lin)**.

Consider **claim 1**, Li discloses a method of reporting reception states of a reverse link comprising a plurality of channels, wherein the pilot and power control bits are transmitted over 20 ms time intervals (col. 3, lines 12-25) from a base station in a mobile station, comprising the steps of: allocating bits indicating the reception states of a reverse frame (col. 3, lines 11-65; each frame of the reverse pilot channel comprises sixteen 1.25 ms power control sub-frames over which a power control group is transmitted, wherein each pilot control group comprises four bits representing a pilot and power control); and transmitting the reverse frame (col. 3, lines 11-65).

Li fails to specifically disclose reception states of first information received on a first traffic channel and second information received on a second traffic channel, wherein reception

state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis.

In related Lin discloses reception states of first information (read as received frame erasure) received on a first traffic channel and second information (read as erasure EIB) received on a second traffic channel, wherein reception state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis. (figure 2; col. 3, line 20 to col. 4, line 27)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Lin into the teachings of Li to determine if the forward traffic channel message should be resent.

Consider **claim 6**, Li discloses a method of controlling transmission power of traffic channels in a base station which transmits pilot and power control bits are transmitted in a reverse link over 20 ms time intervals (col. 3, lines 12-25) to a mobile station, comprising the steps of: receiving a reverse frame (col. 3, lines 11-65); separating the reception state indicating bits from the reverse frame (col. 3, lines 11-65; each frame of the reverse pilot channel comprises sixteen 1.25 ms power control sub-frames over which a power control group is transmitted, wherein each pilot control group comprises four bits representing a pilot and power control), and performing a power control on traffic channels (col. 3, lines 11-65), wherein the reception state are reception result indicator bits for power control on a frame basis (col. 3, lines 11-65).

Li fails to specifically disclose reception states of first information received on a first traffic channel and second information received on a second traffic channel, wherein reception

state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis.

In related Lin discloses reception states of first information (read as received frame erasure) received on a first traffic channel and second information (read as erasure EIB) received on a second traffic channel, wherein reception state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis. (figure 2; col. 3, line 20 to col. 4, line 27)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Lin into the teachings of Li to determine if the forward traffic channel message should be resent.

Consider **claim 2**, and **as applied to claim 1 above**, Li, as modified by Lin, discloses the claimed invention wherein the reception state indicating bits of the first information and the reception state indicating bits of the second information are alternatively allocated. (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 3**, and **as applied to claim 1 above**, Li, as modified by Lin, discloses the claimed invention wherein the reverse frame is a pilot channel frame. (Li: figure 3; col. 3, lines 11-65; Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 4**, and **as applied to claim 1 above**, Li, as modified by Lin, discloses the claimed invention wherein the reception state indicating bits of the first information are QIBs

(Quality Indicator Bits) and the reception state indicating bits of the second information are EIBs (Erasure Indicator Bits). (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 5**, and **as applied to claim 1 above**, Li, as modified by Lin, discloses the claimed invention except for wherein the reception state indicating bits of the first information and the reception state indicating bits of the second information are transmitted at a 50 bps data rate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the bits transmitted at 50 bps for high rate power control, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Consider **claim 7**, and **as applied to claim 6 above**, Li, as modified by Lin, discloses the claimed invention wherein the reception state indicating bits of the first information and the reception state indicating bits of the second information are alternatively allocated. (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 8**, and **as applied to claim 6 above**, Li, as modified by Lin, discloses the claimed invention wherein the reverse frame is a pilot channel frame. (Li: figure 3; col. 3, lines 11-65; Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 9**, and **as applied to claim 6 above**, Li, as modified by Lin, discloses the claimed invention wherein the reception state indicating bits of the first information are QIBs

(Quality Indicator Bits) and the reception state indicating bits of the second information are EIBs (Erasure Indicator Bits). (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 10**, and **as applied to claim 6 above**, Li, as modified by Lin, discloses the claimed invention except for wherein the reception state indicating bits of the first information and the reception state indicating bits of the second information are transmitted at a 50 bps data rate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the bits transmitted at 50 bps for high rate power control, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claims 11-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Li et al. (US 6,590,873 B1; hereinafter Li)** in view of **Lin et al. (US 6,249,894; hereinafter Lin)** and **in further view of Kwon et al. (US 6,151,328; hereinafter Kwon)**

Consider **claim 11**, Li discloses a mobile station for receiving information from a base station (figure 1; col. 2, line 66 to col. 3 line 11; forward link) and reporting reception results information to the base station (figure 1; col. 2, line 66 to col. 3 line 11), comprising: indicating bits of the information (col. 3, lines 11-65); allocating the reception state indicating bits in slots of a reverse frame, each slot having one reception state indicating bit (col. 3, lines 11-65; each frame of the reverse pilot channel comprises sixteen 1.25 ms power control sub-frames over

which a power control group is transmitted, wherein each pilot control group comprises four bits representing a pilot and power control).

Li fails to specifically disclose a first MUX for multiplexing reception state indicating bits of the first and the second information; and a second MUX for sequentially allocating the multiplexed the reception state indicating bits of the first and the second information.

In related art, Lin discloses reception states of first information (read as received frame erasure) received on a first traffic channel and second information (read as erasure EIB) received on a second traffic channel, wherein reception state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis. (figure 2; col. 3, line 20 to col. 4, line 27)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Lin into the teachings of Li to determine if the forward traffic channel message should be resent.

Furthermore, in related art, Kwon discloses first and second multiplexers. (col. 7, lines 13 to 47; col. 12, lines 13-19, 57-65; and col. 13, lines 13-22)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Kwon into the teachings of Li and Lin to control power in a CDMA system which is capable of performing a power control operating in consideration of different environments.

Consider **claim 17**, Li discloses a base station for transmitting to a mobile station and receiving the reception results of the information from the mobile station (figure 1; col. 3, lines

11-65; reverse link), comprising: receiving a reverse frame including a plurality of slots and for separating reception state indicating bits from the reverse frame (figure 1; col. 3, lines 11-65; reverse link).

Li fails to specifically disclose a first demultiplexer (DEMUX) for receiving a reverse frame including a plurality of slots and for separating reception state indicating bits of the first and the second information multiplexed by the mobile station from the reverse frame; and a second DEMUX for demultiplexing the multiplexed reception state indicating bits into the reception state indicating bits of the first information and the reception state indicating bits of the second information.

In related art, Lin discloses reception states of first information (read as received frame erasure) received on a first traffic channel and second information (read as erasure EIB) received on a second traffic channel, wherein reception state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis. (figure 2; col. 3, line 20 to col. 4, line 27)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Lin into the teachings of Li to determine if the forward traffic channel message should be resent.

Furthermore, in related art, Kwon discloses first and second demultiplexers. (col. 1, lines 41-51; col. 4, lines 7-23; col. 8, lines 45-52; and col. 9, lines 13-17 and 45-53)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Kwon into the teachings of Li and Lin to control power

in a CDMA system which is capable of performing a power control operating in consideration of different environments.

Consider **claim 12**, and **as applied to claim 11 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the first MUX allocates a first predetermined number of successive reception state indicating bits of the first information, each bit being allocated to a successive leading slot, and a second predetermined number of successive reception state indicating bits of the second information, each bit being allocated to a successive trailing slot, the trailing slots following the leading slots for the first information. (Kwon: col. 7, lines 13 to 47; col. 12, lines 13-19, 57-65; and col. 13, lines 13-22; Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 13**, and **as applied to claim 11 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the reception state indicating bits of the first and second information are reception result indicator bits for power control on a frame basis. (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 14**, and **as applied to claim 11 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the reverse frame is a pilot channel frame. (Li: figure 3; col. 3, lines 11-65; Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 15**, and **as applied to claim 11 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the reception state indicating bits of the first information are QIBs (Quality Indicator Bits) and the reception state indicating bits of the second information are EIBs (Erasure Indicator Bits). (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 16**, and **as applied to claim 11 above**, Li, as modified by Lin and Kwon, discloses the claimed invention except for wherein the reception state indicating bits of the first information and the reception state indicating bits of the second information are transmitted at a 50 bps data rate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the bits transmitted at 50 bps for high rate power control, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Consider **claim 18**, and **as applied to claim 17 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the multiplexed reception state indicating bits of the first information are arranged in consecutive leading slots of the reverse frame and the multiplexed reception state indicating bits of the second information are arranged in trailing consecutive slots following the leading slots. (Kwon: col. 7, lines 13 to 47; col. 12, lines 13-19, 57-65; and col. 13, lines 13-22; Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 19**, and **as applied to claim 17 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the reception state indicating bits of the first and the

second information are reception result indicator bits for power control on a frame basis. (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 20**, and **as applied to claim 17 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the reverse frame is a pilot channel frame. (Li: figure 3; col. 3, lines 11-65; Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 21**, and **as applied to claim 17 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the reception state indicating bits of the first information are QIBs (Quality Indicator Bits) and the reception state indicating bits of the second information are EIBs (Erasure Indicator Bits). (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 22**, and **as applied to claim 11 above**, Li, as modified by Lin and Kwon, discloses the claimed invention except for wherein the reception state indicating bits of the first information and the reception state indicating bits of the second information are transmitted at a 50 bps data rate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the bits transmitted at 50 bps for high rate power control, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Bobbak Safaipour whose telephone number is (571) 270-1092. The Examiner can normally be reached on Monday-Friday from 9:00am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Lana Le can be reached on (571) 272-7891. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

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3/14/, 2008

/Lana N. Le/
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